EXHIBIT B

Disclosure ARC8-2000-0025

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Summary

Status	Under Evaluation
Processing Location	ARC
Functional Area	DPB - Computer Science - (A.K. Chandra)
Attorney/Patent Professional	Alison Mortinger/Fishkill/Contr/IBM
IDT Team	Alison Mortinger/Fishkill/Contr/IBM; Susana Delgado/Almaden/IBM
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Owning Division	[redacted]
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Incentive Program	
Lab	
Technology Code	

Inventors with Lotus Notes IDs

Inventors: Clifford Harris/Poughkeepsie/IBM, Jeffrey Kreulen/Almaden/IBM, Ray Strong/Almaden/IBM, Vikas Krishna/Almaden/IBM, Kevin McCurley/Almaden/IBM, Neel Sundaresan/Almaden/IBM, Sami Rollins/Almaden/IBM

Inventor Name > denotes primary contact	Inventor Serial	Div/Dept	Manager Serial	Manager Name
Harris, Clifford V	291740	07/F6MD	877702	Ravinsky, Anthony Jr
Kreulen, Jeffrey T	002078	22/K57A	872005	Pass, Norman J
Strong, II, Raymond (Ray)	984805	22/K53E	192724	Raghavan, Prabhakar
> Krishna, Vikas	936467	22/K57F	002078	Kreulen, Jeffrey T
McCurley, Kevin S	210474	22/K53F	984805	Strong, II, Raymond (Ray)
Sundaresan, Neelakantan (Neel)	583678	22/K57G	872005	Pass, Norman J
Rollins, Sami	869727	22/K27G	963618	Sundaresan, Neelakantan (Neel)

Inventors without Lotus Notes IDs

IDT Selection

IDT Team:	Attorney/Patent Professional:
Alison Mortinger/Fishkill/Contr/IBM Susana Delgado/Almaden/IBM	Alison Mortinger/Fishkill/Contr/IBM

Response Due to IP&L: [redacted]

Main Idea

***Title of disclosure (in English)**

Method for Allowing Simple Interoperation Between Backend Database Systems

***Idea of disclosure**

1. Describe your invention, stating the problem solved (if appropriate), and indicating the advantages of using the invention.
Today, there exist very disparate database systems, like problem management systems, at various organisations. between themselves. This disclosure describes a new way to generically connect multiple database systems for i

2. How does the invention solve the problem or achieve an advantage,(a description of "the invention", including figures inline as appropriate)?

The system consists of two main components that plug in between the two or more backend database systems. We call one component the XML Bridge and the other the XML Gateway, described as below. We have demonstrated the usability of this general system by applying it to two particular problem management database systems, namely IBM's Tivoli Service Desk system(TSD) and ATT's eCo Remedy(GEMS) system.

XML Bridge

The TSD/GEMS Problem Ticket Exchange System uses an XML engine, incorporated in the Bridge, to convert the data from one system's format to the other's. The engine uses PATML to specify the rules of conversion between the schema of the two database systems being bridged. The bridge has three other major functions:

1. **Creating:** When a ticket is created in the one system, the other is completely unaware that it exists. So when a ticket is created, it is sent to the bridge for translation and communication to the other system.

2. **Updating:** An existing ticket can be updated in a variety of ways. The severity can be changed, notes can be added, a ticket can be closed, and so forth. When information is updated in the GEMS system, the bridge sends the update to TSD, keeping the two systems synchronised.
Note: TSD problem tickets are not revised, so there is no need to send updates to GEMS. The system is currently capable of sending ticket updates only one way whereas the newly created tickets can
be sent both ways.

3. **Getting Ticket Stock:** When the GEMS system creates a new ticket, it lacks a ticket number that TSD can use (GEMS and TSD use different ticket numbering schemes, so each problem ticket must contain identifiers for both systems). Periodically, the bridge sets aside a stock of TSD-compatible numbers it can use to assign to these newly-created GEMS (and hence TSD) tickets.

Note: The process does not work in the other direction; GEMS is responsible for assigning its own ticket numbers to the problem tickets that TSD creates.
Three queues are associated with the bridge. System Administrators overlooking the system operations can check these queues periodically for problems.

1. **ATT (Remedy) to IBM (TSD):** When GEMS generates a ticket, the bridge converts it to the TSD format. When the ticket is ready to be transferred to TSD, the information is added to this queue. It remains in this queue until it is successfully transferred to the TSD database.

2. **IBM (TSD) to ATT (Remedy):** When TSD generates a ticket, the bridge converts it to the GEMS format. The ticket is then ready to be transferred to GEMS, so the system adds the ticket to this queue. It remains in the queue until it is successfully transferred to the GEMS database.

3. **ATT (Remedy) to IBM (TSD) Tickets Requiring Human Attention:** If a ticket from GEMS cannot be translated to the TSD format, then the system will refer it to this queue for processing by the system administrator. Under ordinary circumstances, such a transfer should never happen. It is

included as a fallback procedure to handle unforeseen failures and to ensure continued ownership of the data in a recognisable format.

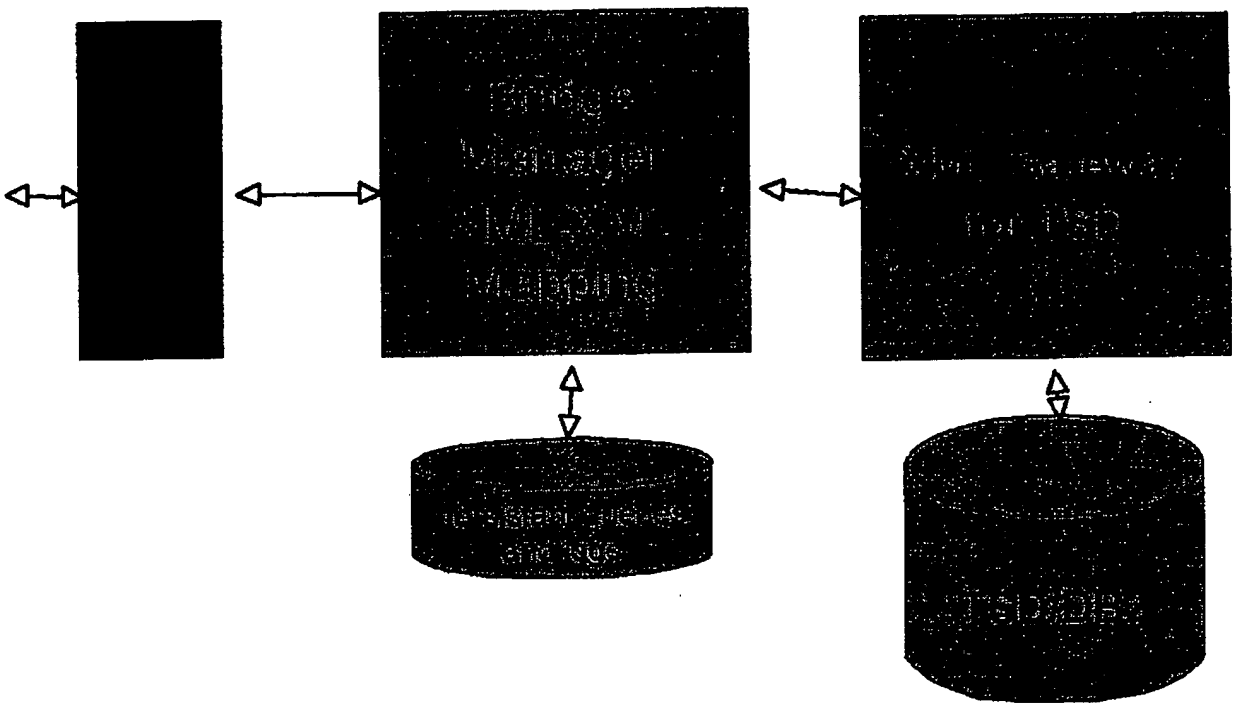
The first two queues are used for tickets that are in transit between the two systems. If the bridge is unable to deliver a ticket in one of these two queues, it will retry a set number of times (one can configure the number of attempts in the Configuration section of system's web-based Admin Console). Once it exceeds this number of tries, the bridge will discontinue the attempt and refer it to the third queue for processing by the system administrator. States of the various queues and events are logged for remote system monitoring through a web browser.

XML Gateway

The gateway is a software layer that exists between the XML bridge and TSD's database. The bridge uses the gateway to communicate with TSD's database. The gateway is written specifically for the database that it is interfacing with. It is capable of converting XML and action commands into appropriate SQL queries against the database. To keep the gateway efficient, it stores no state and hence has minimal interaction with the disc. It only transfers ownership of data between the bridge and the database and vice-versa once the data has successfully reached its intended destination, i.e., the bridge or the database.

The figure below shows the various components connected to each other.

Architecture



3. If the same advantage or problem has been identified by others (inside/outside IBM), how have those others solved it and does your solution differ and why is it better?
Other problem management systems have been bridged in the past using a less generic architecture with a lower level of versatility. This system gains an advantage over others by implementing a database independent Bridge responsible for managing ticket queues containing problem tickets being shipped from one problem management system to another via a database specific Gateway. It also uses XML as the language in which data is passed from one component to another making it easy to plug different problem management systems by simply plugging in their data definition documents(DTD's).

4. If the invention is implemented in a product or prototype, include technical details, purpose, disclosure details to others and the date of that implementation.
This application of the described technology, bridging of the ATT and IBM problem management systems, has been implemented and deployed at a customer site in (Beta test per inventors)

***Critical Questions (Questions 1 - 7 must be answered)**

***Question 1**
On what date was the invention workable? Please format the date as MM/DD/YYYY
(Workable means i.e. when you know that your design will solve the problem)

***Question 2** — ● Yes ○ No
Is there any planned or actual publication or disclosure of your invention to anyone outside IBM?
If yes, Enter the name of each publication or patent and the date published below.
Publication/Patent: Planned to BankOne and AT&T
Date Published or Issued:
Are you aware of any publications, products or patents that relate to this invention? — ○ Yes ● No
If yes, Enter the name of each publication or patent and the date published below.
Publication/Patent:
Date Published or Issued:

***Question 3** — ● Yes ○ No
Has the subject matter of the invention or a product incorporating the invention been sold, used internally in manufacturing, announced for sale, or included in a proposal?
Is a sale, use in manufacturing, product announcement, or proposal planned? — ● Yes ○ No
If Yes, identify the product if known and indicate the date or planned date of sale, announcements, or proposal and to whom the sale, announcement or proposal has been or will be made.
Product:
Version/Release:
Code Name:
Date:
To Whom:
If more than one, use cut and paste and append as necessary in the field provided.

***Question 4** — ○ Yes ● No
Was the subject matter of your invention or a product incorporating your invention used in public, e.g., outside IBM or in the presence of non-IBMers?
If yes, give a date. Please format the date as MM/DD/YYYY

***Question 5** — ○ Yes ● No
Have you ever discussed your invention with others not employed at IBM?
If yes, identify individuals and date discussed. Fill in the text area with the following information, the names of the individuals, the employer, date discussed, under CDA, and CDA #.

***Question 6** — ○ Yes ● No ○ Not sure
Was the invention, in any way, started or developed under a government contract or project?
If Yes, enter the contract number.

***Question 7** — ○ Yes ● No ○ Not Sure
Was the invention made in the course of any alliance, joint development or other contract activities?
If Yes, enter the following: Name of Alliance, Contractor or Joint Developer

Contract ID number
Relationship contact name
Relationship contact E-mail
Relationship contact phone

Question 8
Have you submitted, or are you aware of, any related disclosure submission? ○ Yes ● No
If Yes, please provide the title and docket or disclosure number below:

Question 9
What type of companies do you expect to compete with inventions of this type? *Check all that apply.*

- ☐ Manufacturers of enterprise servers
- ☐ Manufacturers of entry servers
- ☐ Manufacturers of workstations
- ☐ Manufacturers of PC's
- ☐ Non-computer manufacturers
- ☐ Developers of operating systems
- ☐ Developers of networking software
- ☒ Developers of application software
- ☒ Integrated solution providers
- ☒ Service providers
- ☐ Other (Please specify below)

Patent Value Tool (Optional - this may be used by the inventor and attorney to assist with the evaluati

(The Patent Value tool can be used by you or the evaluation team to determine the potential licensing value of your invention.)

The **Patent Value Tool** has not yet been used to calculate a score.

Post Disclosure Text & Drawings
Enter any additional information relating to this disclosure below:

(Form Revised)